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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/151,555	09/11/1998	RAJEEB HAZRA	42390.P5277	7941

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EXAMINER

ROGERS, SCOTT A

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 05/08/2002

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/151,555

Applicant(s)

HAZRA ET AL.

Examiner

Scott A Rogers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 6, 7, 11-14, 16, 19-23, 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Go (US 5878172).

Regarding claims 1-4, 6-8, 11-14, 16, 19-23, and 26:

Go discloses in columns 14-15, referring to Figures 9 and 10, generation (52) and coding (24) of edge detection maps (Sv and Sh) at least along vertical and horizontal directions for an uncoded video frame that is to be coded. The compression (i.e., the coding) of the edge detection maps is done separately from the frame, which is coded by

encoder 25. Referring to Figures 11 and 12 in column 15, Go discusses the corresponding video decoding.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 15, 17, 24, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Go as applied to claims 4, 14, 16, 23, and 26 above, and further in view of Fan (US 5359676).

Go does not disclose the feature of an edge-sensitive post-filter with the capability to enhance a decoded video frame based on at least one or more decoded edge detection maps associated with the decoded video frame. Fan discloses such a feature. See col. 10, lines 27-44 and col. 11, lines 9-14.

It would have been obvious to one of ordinary skill in the art to have modified Go in view of Fan to have included such an edge-sensitive post-filter feature in order to reduce image noise and improve appearance of the decompressed video frame.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Go as applied to claim 6 above, and further in view of Schreiber (US 3035121).

Reading claim 8 as a further limitation to include the capability to code the edge detection map for transmission separately from the transmission of the associated coded video frame, Schreiber at least shows separate transmission of a coded edge detection maps (difference signals) and continuous-tone signals. See col. 3, lines 55-60 and the paragraph starting at the bottom of col. 4.

It would have been obvious to one of ordinary skill in the art to have modified Go in view of Schreiber to have included such a separate transmission feature so that less information needs to be transmitted, and spurious contours and unnecessary edge signals are eliminated. See the last paragraph starting at the bottom of col. 5.

Claims 9, 10, 18, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Go as applied to claims 4, 14, 16, 23, and 26 above, and further in view of well known prior art (MPEP 2144.03).

While Go does not store either together or separately a coded edge detection map and the associated coded video frame, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to have provided such storage as it is well known in the art to store associated data, either together or separately, and such storage would provide the advantage of buffering or archiving the data in a

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compressed form requiring less storage capacity and eliminating the need to again code the data for repeated or later access or transmission.

Remarks

Applicant acknowledged the error in the remarks of the previous amendment, but on page 4 repeated the error. In any event, the examiner acknowledges the arguments as relating to the deficiencies in Fan based on applicant remarks on page 2. However, the features which were argued as not being taught in Fan, are found in Go. Fan is cited only for the feature of an edge-sensitive post-filter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Rogers whose telephone number is 703-305-4726 and e-mail address is scott.rogers@uspto.gov.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.


SCOTT ROGERS
PRIMARY EXAMINER

May 5, 2002